AMENDMENT TO REQUEST FOR PROPOSAL
Variable frequency Drives (VFD)

REQUEST FOR PROPOSAL NO. 13P0021RD
Procurement Officer: Rick A. Danielson
Issue Date: January 24, 2013

AMENDMENT NO. 1
Effective Date: February 7, 2013

ISSUED TO:
All Prospective Offerors

ISSUED BY:
University of Alaska Fairbanks
Procurement & Contract Services
PO Box 757940
Fairbanks AK 99775-7940

Dear Vendor:

The following clarifications, revisions, and changes have been made to Request for Proposal No. 13P0021RD for Variable frequency Drives:

This amendment provides for a change in the solicitation closing date to: Monday, February 18, 2013, 5:00PM local time.

This amendment requires acknowledgement, please submit the attached acknowledgement page with your proposal submission.

A drawing, E3.3 has been added to the link for drawings providing for “typical” enclosure dimensions for general guidance: http://webshare.alaska.edu/BARN3/BARN3%20Drawings/

Clarifications and question responses:

Question: Are filters acceptable for VFD’s specified 18 pulse, can 6 pulse with filters be substituted for 18 pulse?
Answer: No, 18 pulse are required as specified.

Question: Are harmonic filters acceptable instead of 18 pulse series units?
Answer: No, 18 pulse are required as specified.

(the above two questions are responses to a number of questions submitted regarding alternative filters)

Question: Does the filter need to be in the same enclosure as the VFD?
Answer: Filters shall be provided with in the VFD cabinet enclosure where possible. If not possible, provide cabinet enclosures for the filters compatible with the VFD.
**Question:** The site DCS serial link is Delta V. What actual protocol can we use for a serial communication link or is the Delta V system discrete I/O?
**Answer:** Modbus or discrete I/O is acceptable.

**Question:** What is the budget?
**Answer:** UAF does not provide estimates, budgets, or quotations as part of formal solicitations for commodities.

**Question:** Are the any space constraints?
**Answer:** The above referenced drawing (E3.3) has been provided as typical and approximate enclosure sizes and is representative only. Space is limited and offerors should propose the minimum size cabinet to accommodate the proposed VFD controllers.

**Question:** Top ambient is 40 C. Is there a low ambient?
**Answer:** No

**Question:** How long does UAF anticipate it will take them to approve drawings?
**Answer:** UAF estimates 1 week to approve post award submittals (P.14; 1.2) and will not exceed 2 weeks.

**Question:** Specification Part 2.1.C “Provide redundant drives in a single VFD controller …..” what does this mean?
**Answer:** Where redundant drives are specified, both should be in a single enclosure as represented on drawing E3.3.

**Question:** Spec Part 2.3.C “speed range identified as 24-60 Hz and adjustable”, will 24hz be the absolute minimum?
**Answer:** The speed range is 24hz to 60hz as specified.

**Question:** Does UAF have a schedule for the manufacturer’s field service start up site visits?
**Answer:** There currently is no set schedule, it is anticipated that 9-10 VFD startups will occur between the delivery date and November of 2013 with the remaining 12-13 to be done in the spring of 2014. The actual schedule for the four site visits will be scheduled dependent upon the installation progress.

**Question:** Spec Part 1.4, warranty, is it acceptable to exclude labor, travel time and expenses?
**Answer:** As specified on P.15 - 1.4 “Warranty: The warranty shall include all parts, labor, travel time and expenses”. Failure to provide the warranty as specified, and demonstrating the method and ability to provide support and service as described on P.11 and noted on P.21 would be grounds to find the proposal non-responsive based upon the specification, evaluation criteria, and required submittals.

**Question:** Is it possible to get an accurate one line including?:
- Primary transformer and secondary transformer KVA, Impedance (Z%), Voltages, Primary type (transformer or generator) and short circuit estimates
- Point of common coupling for IEEE519 compliance
- Any other load on the system bus that we can add in to our harmonics modeling tool, inductive or other loads in amps (includes loads from primary (utility) transformer to secondary transformers and after secondary transformers.
- Cable lengths of transformer to transformer (i.e. Primary to Secondary) and transformer to distribution panel

**Answer:** E3.0 dated 1/23/2013 is the most current. Feeder sizes and cable length are not required in the preparation of the proposal, and this information will be provided after award. The common point of coupling would be the secondary side of each individual transformer. Perform analysis for what is indicated on E3.0, not loads beyond it.
Question: Does UAF want us to quote all <100HP VFDs with passive harmonic filters like TCI HG-7 filters (each would require field mounting and wiring). VFD package cost would double, wall space would increase to 185% and total line current savings would be less than 3%. If the desired scope is as indicated in the spec and drawings - allow the harmonic compliance to be THD voltage only and specify 18 pulse where they are called for now. Strike no more than 5 percent total harmonic current distortion from paragraph 2 in the attached would solve the problem.

Answer: See the attached amended specification page(s) 14-16 with deletions shown with strike through, and revisions/additions shown on bold italic.

Additional Information: This solicitation is a formal Request for Proposal (RFP). As such, all required documentation as described throughout the solicitation and summarized on page 21, is required as part of your proposal submission to be considered administratively responsive. Note that the electronic signature page (P. 2) provides clickable links to required supporting documents and are designated with checked boxes next to the underlined link.

Actions: Replace RFP13P0021RD Original pages 14-16 with amendment #1 replacement pages 14-16 (attached) Revisions to Part 1; 1.2.D.2 and Part 2; 2.1.A (1)

All other terms and conditions remain the same.

Sincerely,

UNIVERSITY OF ALASKA FAIRBANKS

Rick A. Danielson
Contracting Officer
ACKNOWLEDGMENT; Amendment #1, RFP13P0021RD, Variable frequency Drives
This Amendment must be signed and returned with your proposal or otherwise acknowledged prior to the closing date and time listed above. If you have already submitted a proposal and need to make corrections, submit a corrected proposal prior to the closing. The closing date is Monday, February 18, 2013, 5:00 PM local time.

________________________________________________________________________
Offeror                                                                 Name & Title

________________________________________________________________________
Signature                                                                Date
PART 1  GENERAL

1.1  SCOPE

PROVIDE A.C. VARIABLE FREQUENCY DRIVES AS SHOWN ON THE DRAWINGS AND AS SPECIFIED HEREIN.

1.2  POST AWARD SUBMITTALS

A. Shop drawings and maintenance and operating instructions indicating manufacturer, type, ratings, accessories and features for each variable speed drive. Include complete schematic wiring and field wiring diagrams. Also include detailed maintenance, testing and operating information, complete parts list, a copy of the manufacturer's warranty, and service availability information.

B. Provide catalog sheets showing voltage, controller size, ratings and size of switching and overcurrent protective devices, short circuit ratings, dimensions and enclosure details.

C. Include with shop drawings a certified statement to the effect that each variable frequency drive and its respective motor and mechanical load are totally compatible, and that the drive will not adversely affect its associated motor in any way, under any allowable speed conditions.

D. The VFD manufacturer shall provide calculations specific to this installation, showing the predicted total harmonics in the power plant after all new VFD’s are installed.

   1) Total harmonic voltage distortion is less than 5 percent.

   2) Individual or simultaneous operation of VFD’s shall not add more than 5 percent total harmonic voltage distortion (per IEEE 519-1992) and no more than 5 percent total harmonic current distortion (per IEEE 519-1992) to the normal bus.

   3) The VFD manufacturer shall perform harmonic analysis calculations based on the electrical one-line diagram.
4) Input line filters shall be sized and provided as required by the VFD manufacturer to ensure compliance with IEEE Standard 519. All VFD’s shall include a minimum of 5 percent impedance reactors, no exceptions.

1.2.1 PROPOSAL EVALUATION REQUIRED SUBMISSION DATA

Provide manufacturers data sheets, cut sheets, catalog sheets, and any other information showing voltage, controller size, ratings and size of switching and overcurrent protective devices, short circuit ratings, dimensions, and enclosure details in the detail provided to easily evaluate that the proposal meets all specifications and meets or exceeds the standards as described herein.

1.3 QUALITY ASSURANCE

A. Acceptable Manufacturers:

1. VFD’s manufactured by a third party and “brand labeled” are not acceptable and shall be found non-responsive.

2. The drive manufacturer shall have an existing sales and service network in support of the manufacturer’s products specified in this solicitation.

3. The drive manufacturer shall have a full scope service organization.

4. The drive manufacturer shall have factory trained service personnel, preferably in the Fairbanks or Anchorage area that are thoroughly familiar with the VFD products offered.

5. The offeror shall have a fully equipped service organization capable of guaranteeing response time within 48 hours of service calls to service the VFD.

6. There shall be 24/7/365 support available via a toll free phone number.

1.4 WARRANTY

A. Provide a warranty for all drives and accessories for a minimum period of 12 months from the date of certified start-up, but not to exceed 30 months from the date of shipment. The warranty shall include all parts, labor, travel time and expenses.
PART 2   PRODUCTS

2.1  GENERAL

A. Adjustable frequency/adjustable voltage drives, selectable to control variable torque loads driven by standard NEMA B and F design existing squirrel cage induction motors as indicated on the drawings. Brand name or equal using the following manufacturers as a standard for salient characteristics and specifications: Allen-Bradley Power Flex 700, Eaton SVX series, and Yaskawa P1000 series. For motors at 100HP and above as indicated on the drawings, provide clean power VFD’s as represented by the following: Allen Bradley PowerFlex 18-pulse series, Eaton CPX 18-pulse series, Yaskawa P7 18-pulse series. It is incumbent upon any offeror to provide all required documentation, brochures, drawings, evidence, and submittals for UAF to make determination of meeting specifications, salient characteristics, and quality standards.

(1) Due to space limitations, the 75hp drives designated as #18 & #19 on P. 22, Rate Response Form may have TDD characteristics in excess of IEEE 519 Limits.

B. Designed, selected for and totally compatible with, the specific existing motor and associated mechanical load controlled.

C. Provide redundant drives in single VFD controller as indicated on the drawings, suitable for the input and a base output of the equipment driven. Provide a constant voltage/frequency ratio over the entire speed range with a minimum short circuit withstand rating of 100,000 RMS symmetrical amperes.

D. Designed for ability to operate controller with motor disconnected from output.

E. Link for additional supporting information providing:

E3.0; Electrical One Line Drawing

E3.1; Motor & VFD Schedules

E3.2; Drawing

BARN3 VFD Schedule

http://webshare.alaska.edu/BARN3/BARN3%20Drawings/